

Low Voltage Switch Company - Low Voltage Electronic Components



MZW2 Series Intelligent Universal Circuit Breaker

About the Product:

MZW2 Series Intelligent Universal Circuit Breaker has assimilated all advantages of domestic and foreign various intelligent circuit breakers. It has such features as compact structure, high reliability, short partition time and without flying arc. Besides many protection functions, it also has many auxiliary functions, such as: ammeter, voltmeter, power factor meter, malfunction finding, self-diagnosis MCR and so on. It has communication interface and can realize four remote control functions. The product has passed IEC60947-2(97) international latest EMC standards and various strict model test examinations. Its chief technical specifications have reached the advanced level of similar products.

Functions and Categories

MZW2 Series Intelligent Universal Circuit Breaker (hereinafter refers to the circuit breaker) is of 400V、690V rated voltage, AC 50Hz, 400A ~ 6300A rated current. It is mainly applied to power distribution system for distributing electric energy and protecting the circuit as well as the power supply devices against overload, short circuit, single phase grounding, lack of voltage and so on. This circuit breaker has many intelligent protection functions and can provide selective protection with accurate movement, which can avoid unnecessary power failure and improve the reliability of power supply. It has open communication interface which can realize four remotes to meet the demands of the group center as well as automation system.

Its pulse voltage tolerance is 8000V at the altitude of 2000M (different altitudes can be rectified according to the standards and the maximum is 12000V). The intelligent button releaser and sensor are not attached with the circuit breaker. It can be used for isolation.

The circuit breaker meets GB14048.2 《Low Voltage Switch Equipments and

Control Equipments Low Voltage Circuit Breaker》 and IEC60947.2 《Low Voltage Switch Equipments and Control Equipments》 standards.

Categories

A in terms of usage

a non-selective

b selective

B in terms of installation mode

a fixed

b drawer-type

C in terms of the grade: three grades and four grades

D in terms of operation means

a electrical operation

b manual operation (for inspection)

categories of release button

intelligent overload current controller, instantaneous or delayed lack-of-voltage button release and so on.

Performances and features of intelligent overload current controller

Performance Feature

performance:

a intelligent controller are: H Type (communication type), M Type (general type), L Type (economical type), 2M Type (high resistance of disturbance), 2H Type (high resistance of disturbance communication type)

b has overload anti long delay limit and anti short delay limit, time limit and instantaneous movement functions. Users can set necessary protection features by themselves.

c single phase grounding protection function

d display function: setting current display, moving current display and every wire voltage display (voltage display should be stated in the order.)

e alarm function: overload alarm

f self-inspect function: self-inspect for overheat, computer self-diagnose

g test function: test controller movement features

there are five kinds of intelligent controller in terms of function

L Type -economical type (current column display, dial plate for adjustment)

M Type-general type (current digit display, button adjusts)

H Type -communication type (current digit display, button adjusts as well as communications)

2M Type-high resistance of disturbance (digit display, button adjusts)

2H Type -high resistance of disturbance communication type (current digit display, button adjusts as well as communications)

Specification and Model

| Function | | power distribution or motor protection/generator protection | | | | note | |
|-----------|---|---|-------------------|--|--|--|--|
| Model | H Type、 2H Type | | | | | 1 communication interface: provide standard RS485 interface, multi-protocol data transmission function (internal accumulated communication protocol MODBUS protocol) | 1 All are digit units. 2 L Type adopts LED display, code switch and dial switch setting mode.3 .M、 H、 2M、 2H types adopt digital tube display and button adjusting mode. |
| | M Type、 2M Type | | | | | | |
| | L Type | | | functional meters measure: voltage, frequency, power factors, active power and active electric | | | |
| | L4 selective protection and ground or leakage | | | | | | |
| | L3 selective protection | | | | | | |
| | L2 basic protection | short delay | ground or leakage | | | | |
| | long delay and instantaneous | | | | | | |
| functions | other auxiliary functions | 1 RMS protection | | 1 more protection functions, five feature curves are selectable. | | | |
| | | 2 load current light column display | | 2 contact attrition and mechanical life span instruction | | | |
| | | 3 four groups of signal contact points output (can be programmed) | | 3 load monitor | | | |
| | | 4 test function | | 4 incident record | | | |
| | | 5 breakdown memory function | | 5 programming interface | | | |
| | | 6 self-diagnose function | | 6 breakdown clock | | | |
| | | 7 MCU puts through and skips the switch | | 7 history record of electric network parameter | | | |
| | | 8 heat memory function | | 2 position lock: selective "set, local and remote control" position states | | | |

Normal Working Conditions

Surrounding air temperature: maximum +40 , minimum -5

24 hours average value less than +35

note: A If minimum is +10 or -25 , please state it in the order.

B If maximum is over +40 and minimum is below +10 or -25 , please consult with us.

Atmospheric conditions

The air relative humidity should below 50% at the temperature of +40 ; It can be a little higher during lower temperature. The highest relative humidity in the most humid month should be 90% and the monthly lowest average temperature is +25 . The dew on the surface of the product due to the temperature change is considered. If beyond these stipulations, please consult with us.

protection rank: IP30

category: B or A

Installation Category

Circuit breakers of rated working voltage 690V and below are belong to installation category ; Except lack-of-voltage button release coil and power supply transformer preliminary coil are identical with the main circuit, the installation category of other auxiliary circuits belongs to 400V rated working voltage auxiliary circuit installation category III. The rated short circuit breaking ability and short term current tolerance of the circuit breaker please refer to Table II. Technical

parameters and data:

1 Please refer to Table I for the rated current of the circuit breaker

| | |
|--|------------------------------------|
| rated current of shell and frame grade INM (A) | rated current IN (A) |
| 2000 | (400)630、800、1000、1250、1600、2000 |
| 3200 | 2000、2500、3200 |
| 4000 | 3600、400 |
| 6300 | 4000、5000、6300 |

The rated short circuit breaking ability and short term current tolerance of the circuit breaker please refer to Table II. The flying arc distance of the circuit breaker is “zero” (that is, there is no flying arc outside the circuit breaker)

| | | | | | |
|--|------|----------|---------|--------------|---------------|
| rated current of shell and frame grade INM (A) | | 2000 | 3200 | 4000 | 6300 |
| rated extreme short circuit breaking ability | 400V | 80 | 100 | 100 | 120 |
| ICU (KA) O—CO | 690V | 50 | 65 | 75 | 85 |
| rated short circuit putting through ability | 400V | 176/0.2 | 220/0.2 | 220/0.2 | 264/0.2 |
| NXICU (KA) /COSF | 690V | 105/0.25 | 143/0.2 | 165/0.2 | 187/0.2 |
| rated operating short circuit breaking ability | 400V | 50 | 65 | 80 | 100 |
| ICU (KA) O-CO-CO | 690V | 40 | 65 | 65 | 75 |
| rated short circuit current tolerance ICW | 400V | 50 | 65 | 65/80(MCR) | 85/100(MCR) |
| (KA) 1S , delay 0.4S,0-CO | 690V | 40 | 50 | 50/65(MCR) | 65/75 (MCR) |

The maximum power loss of the circuit breaker is 360W. Please refer to Table III for the rated continuous current change in different temperatures. Note: the capacity fall coefficient is 0.9 if the current is above 2500A. The capacity does not fall at 4000A within 6300A.